

## **REMARKS**

Applicants have not amended any claims in this response. Accordingly, claims 1, 7, 11-14, 19-21, 25-27, 29, 33, 34, 37, and 41-44 remain pending in this patent application. Applicants now address each and every point raised in the above-identified Office action as follows:

### **I. Claim Rejections Under Section 103**

- A. Claims 1, 7, 11, 12, 14, and 19-21 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over JP 05-156301 as evidenced by Nakamura et al. (US 5,934,542) and in view of JP 10-284547.

Applicants' invention as recited in independent claims 1 and 14 comprises a cermet material having a very specific material content. Namely, comprising a first phase of WC grains and a second phase "consisting essentially of" iron, Co, Ni, C and Mn.

JP '301 discloses a sintered article formed by combining an Invar or Super Invar powder with a ceramic powder that may be a carbide. As noted by the Examiner, JP '301 does not disclose the use of WC. Additionally, the Invar or Super Invar powder disclosed in JP '301 (as set forth in Table 1) has a material composition that includes materials in addition to those within the scope of Applicants' claims (in view of "consisting essentially" language).

Applicants only received a copy of the Derwent abstract translation for JP '547, and did not receive a copy of the reference itself. As best as can be determined, JP '547 discloses a contact tool having a main body tool joined to a shank by a soldering material. The main body tool has a base made from 90 to 98 percent by weight WC with Co. The Examiner relies on JP '547 for introducing W into the ceramic powder of JP '301 in the event that such is carbide. However, like JP '301, JP '547 fails to disclose a binder alloy having the same material make up as Applicants' binder recited in independent claims 1 and 14.

Nakamura has been relied upon by the Examiner for its disclosure of Super Invar. However, it is important to note that the Super Invar material composition as recited in Nakamura includes materials other those within the scope of Applicants' claims (in view of "consisting essentially" language).

In view of the above-noted common shortcoming of each of the cited references (failing to disclose the exact combination of materials making up the binder alloy as recited in independent claims 1 and 14), the combination of these references could not therefore produce a material composition that is missing in each. Applicants, therefore, submit that one having ordinary skill in the art combining these references would not find Applicants' cermet material as recited in independent claims 1 and 14 to be obvious in view thereof. For this reason, Applicants respectfully request that the rejection of these claims, and the claims depending therefrom, under 35 U.S.C. §103(a) be reconsidered and withdrawn.

- B. Claims 13, 33, 34, 37, 41, and 42 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Sue et al. (US 2006/0222853) in view of JP '301 as evidenced by Nakamura et al. and in view of JP '547.

Here, the Examiner relies on Sue for its disclosure of a roller cone rock bit, inserts in the rock bit, WC combined with alloys to form an insert material, and a material microstructure of WC-Co surrounded by a further ductile material such as Co. However, Sue fails to disclose a binder alloy having the specific material content recited in Applicants' independent claims 1 and 33 (as discussed above).

Thus, Applicants submit that the further combination of Sue with the other references (JP '301, JP '547 and Nakamura) does not operate to render obvious that which is missing in each of the above-noted references for the same reason presented above. Applicants, therefore, respectfully request that the rejection of these claims, and the claims depending therefrom, under 35 U.S.C. §103(a) be reconsidered and withdrawn.

- C. Claims 25-27 and 29 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Sue et al. in view of JP '301 as evidenced by Nakamura et al. and in view of JP '547.

Applicants submit that the subject matter as recited in independent claim 25 is not obvious in view of the combination of noted references for the same reasons presented above as it applies to independent claim 1, since independent claim 25 also recites the specific content of the binder alloy using the "consisting essentially of" language. Applicants, therefore, respectfully request that the rejection of these claims, and the claims depending therefrom, under 35 U.S.C. §103(a) be reconsidered and withdrawn.

- D. Claims 43 and 44 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Sue et al. in view of JP '301 as evidenced by Nakamura et al. and in view of JP '547.

Applicants submit that the subject matter as recited in independent claim 43 is not obvious in view of the combination of noted references for the same reasons presented above as it applies to independent claim 1, since independent claim 43 also recites the specific content of the binder alloy using the "consisting essentially of" language. Applicants, therefore, respectfully request that the rejection of these claims, and the claims depending therefrom, under 35 U.S.C. §103(a) be reconsidered and withdrawn.

## **II. Conclusion**

For the reasons presented above, Applicants respectfully request that the rejection of the claims under 35 U.S.C. § 103 be reconsidered and withdrawn, and that the claims 1, 7, 11-14, 19-21, 25-27, 29, 33, 34, 37, and 41-44 pending in this patent application be passed to allowance.

Should the Examiner's evaluate this Response and conclude that the claims are not properly allowable, Applicants request that the Examiner please call its below-identified patent attorney to discuss options that may be implemented to facilitate allowance.

The proceedings herein are for a patent application and the provisions of 37 C.F.R. 1.136 apply. The Commissioner is authorized to charge any underpayment, and to credit any overpayment of fees due, including extension of time fees, to Deposit Account No. 50-3683.

Respectfully submitted,

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